| Ref        | Hits   | Search Query                                                                                                                                                                                                                                                                                     | DBs                          | Default  | Plurals | Time Stamp       |
|------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------|---------|------------------|
| #          |        |                                                                                                                                                                                                                                                                                                  |                              | Operator |         |                  |
| S1         | 17072  | phase adj (detector or discriminator)                                                                                                                                                                                                                                                            | US-PGPUB;<br>USPAT           | OR       | OFF     | 2004/11/17 12:34 |
| S2         | 41586  | ff or f/f or flip-flop\$2 and sr                                                                                                                                                                                                                                                                 | US-PGPUB;<br>USPAT           | OR       | OFF     | 2004/11/15 17:33 |
| S3         | 753    | S1 and S2                                                                                                                                                                                                                                                                                        | US-PGPUB;<br>USPAT           | OR       | OFF     | 2004/11/15 17:33 |
| S4         | 17096  | phase adj (detector or discriminator)                                                                                                                                                                                                                                                            | US-PGPUB;<br>USPAT           | OR       | OFF     | 2004/11/17 12:35 |
| S5         | 3075   | (ff or f/f or latch or flip-flop) and SR and inverter                                                                                                                                                                                                                                            | US-PGPUB;<br>USPAT           | OR       | OFF     | 2004/11/17 15:14 |
| S6         | 34568  | (phase adj lock\$3 adj loop\$3)                                                                                                                                                                                                                                                                  | US-PGPUB;<br>USPAT           | OR       | OFF     | 2004/11/17 12:37 |
| <b>S7</b>  | 95     | S4 and S5 and S6                                                                                                                                                                                                                                                                                 | US-PGPUB;<br>USPAT           | OR       | OFF     | 2004/11/17 12:37 |
| <b>S</b> 8 | 3464   | (ff or f/f or latch or flip-flop or register) and SR and inverter                                                                                                                                                                                                                                | US-PGPUB;<br>USPAT           | OR ,     | OFF     | 2004/11/17 16:32 |
| S9         | 158    | S4 and S8                                                                                                                                                                                                                                                                                        | US-PGPUB;<br>USPAT           | OR       | OFF     | 2004/11/17 13:33 |
| S10        | 104    | S9 and S6                                                                                                                                                                                                                                                                                        | US-PGPUB;<br>USPAT           | OR       | OFF     | 2004/11/17 13:33 |
| S11        | 5      | ("6326812").URPN.                                                                                                                                                                                                                                                                                | USPAT                        | OR       | OFF     | 2004/11/17 13:36 |
| S12        | 5      | ("6326812").URPN.                                                                                                                                                                                                                                                                                | USPAT                        | OR       | OFF     | 2004/11/17 14:16 |
| S13        | 6      | ("4839604"   "5133064"   "5550782"  <br>"5550783"   "5578945"   "5668504").PN.                                                                                                                                                                                                                   | US-PGPUB;<br>USPAT;<br>USOCR | OR       | OFF     | 2004/11/17 14:18 |
| S14        | 6      | ("4272729"   "5015970"   "5160900"  <br>"5208839"   "5285483"   "5363419").PN.                                                                                                                                                                                                                   | US-PGPUB;<br>USPAT;<br>USOCR | OR       | OFF     | 2004/11/17 14:26 |
| S15        | 18     | ("5487093").URPN.                                                                                                                                                                                                                                                                                | USPAT                        | OR       | OFF     | 2004/11/17 14:29 |
| S16        | 3      | ("4894734"   "5162746"   "5170297").PN.                                                                                                                                                                                                                                                          | US-PGPUB;<br>USPAT;<br>USOCR | OR       | OFF     | 2004/11/17 14:36 |
| S17        | 12     | ("4894734"   "5162746"   "5170297").PN. OR<br>("5307028").URPN.                                                                                                                                                                                                                                  | US-PGPUB;<br>USPAT;<br>USOCR | OR       | OFF     | 2004/11/17 14:37 |
| S18        | 119    | ("3758720"   "3829790"   "3961269"   "4468634"   "4486850"   "4504745"   "4521893"   "4590439"   "4630193"   "4644498"   "4673891"   "4677394"   "4689581"   "4754164"   "4774686"   "4779008"   "4829545"   "4847516"   "4862104"   "4864253"   "4893271"   "4906944").PN. OR ("5133064").URPN. | US-PGPUB;<br>USPAT;<br>USOCR | OR       | OFF     | 2004/11/17 14:45 |
| S19        | 32     | ("3670249"   "3921079"   "3942124"  <br>"3947697"   "4286173"   "4337433"  <br>"4380083"   "4398208"   "4423383"  <br>"4562247"   "4636656"   "4638256"  <br>"4686480"   "4700350"   "4719365"  <br>"4772888").PN. OR ("4839604").URPN.                                                          | US-PGPUB;<br>USPAT;<br>USOCR | OR       | OFF     | 2004/11/17 15:10 |
| S20        | 271103 | (ff or f/f or latch or flip-flop)                                                                                                                                                                                                                                                                | US-PGPUB;<br>USPAT           | OR       | OFF     | 2004/11/17 15:15 |

| •   |        |                                                                                                        |                                                       |    |     |                  |
|-----|--------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----|-----|------------------|
| S21 | 11752  | S20 and S6                                                                                             | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 15:16 |
| S22 | 113164 | sr                                                                                                     | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 15:16 |
| S23 | 706    | S21 and S22                                                                                            | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 15:16 |
| S24 | 52928  | nand                                                                                                   | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 15:16 |
| S25 | 232    | S23 and S24                                                                                            | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 15:17 |
| S26 | 129721 | inverter\$3                                                                                            | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 15:17 |
| S27 | 200    | S25 and S26                                                                                            | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 15:18 |
| S28 | 1313   | first adj flip-flop and second adj flip-flop and<br>third adj flip-flop                                | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 15:19 |
| S29 | 124    | S28 and S4                                                                                             | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 15:20 |
| S30 | 43     | S29 and S24                                                                                            | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 15:20 |
| S31 | 40     | ("3610954"   "3710140"   "3714463"  <br>"4023116"   "4122405"   "4278903").PN. OR<br>("4322643").URPN. | US-PGPUB;<br>USPAT;<br>USOCR                          | OR | OFF | 2004/11/17 15:43 |
| S32 | 2      | ("5754481").PN.                                                                                        | US-PGPUB;<br>USPAT;<br>USOCR;<br>DERWENT<br>; IBM_TDB | OR | OFF | 2004/11/17 16:18 |
| S33 | 467217 | (ff or f/f or latch or flip-flop or register)                                                          | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 16:32 |
| S34 | 7291   | S4 and S33                                                                                             | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 16:33 |
| S35 | 124    | S28 and S34                                                                                            | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/17 16:33 |
| S36 | 525    | ((327/23) or (327/43)).CCLS.                                                                           | US-PGPUB;<br>USPAT;<br>USOCR;<br>DERWENT<br>; IBM_TDB | OR | OFF | 2004/11/18 09:41 |
| S37 | 25523  | phase adj (detector or discriminator or comparator)                                                    | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/18 09:42 |
| S38 | 54     | S36 and S37                                                                                            | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/18 11:13 |
| S43 | 266    | first adj flip-flop and second adj flip-flop and<br>third adj flip-flop and up same down               | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/18 11:15 |
| S44 | 41300  | phase adj lock\$3 adj loop\$1 or pll                                                                   | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/19 10:31 |
| S45 | 11380  | charge adj pump                                                                                        | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/19 10:31 |
| S46 | 9301   | loop adj filter                                                                                        | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/19 10:31 |
| S47 | 28621  | voltage adj control\$3 adj oscillat\$4 or vco                                                          | US-PGPUB;<br>USPAT                                    | OR | OFF | 2004/11/19 10:32 |

| S48        | 16246 | phase adj detector                          | US-PGPUB;<br>USPAT | OR | OFF | 2004/11/19 10:33 |
|------------|-------|---------------------------------------------|--------------------|----|-----|------------------|
| <b>S49</b> | 2787  | clock adj buffer                            | US-PGPUB;<br>USPAT | OR | OFF | 2004/11/19 10:33 |
| S50        | 78    | S44 and S45 AND S46 AND S47 AND S48 AND S49 | US-PGPUB;<br>USPAT | OR | OFF | 2004/11/19 10:33 |